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Population Movement Into and Out of Canada's Immigrant Gateway Cities: A Comparative Study of Toronto, Montreal and Vancouver

by Feng Hou and Larry S. Bourne

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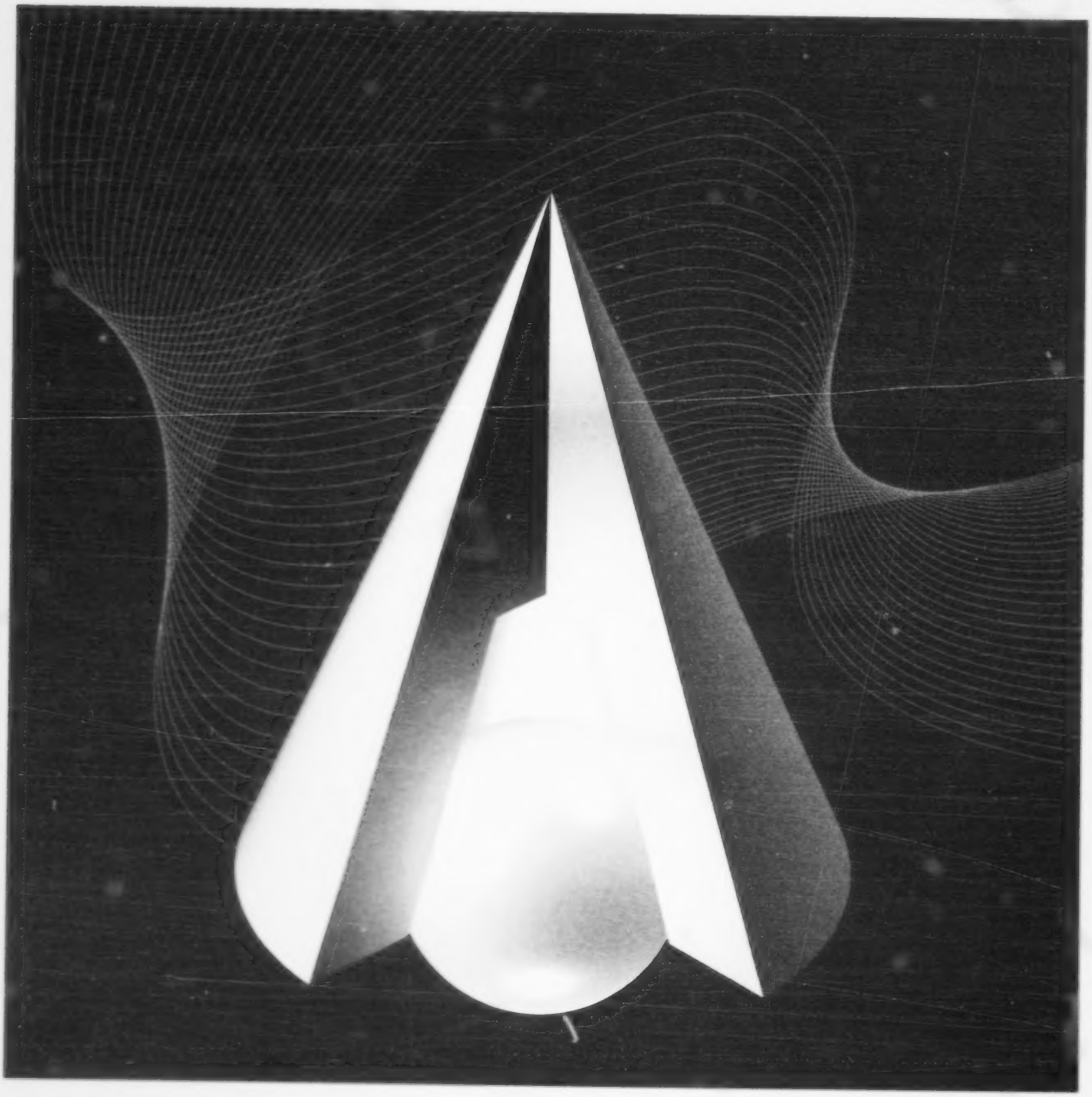

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ABSTRACT

This study examines trends in the internal migration of the Canadian-born and long-term immigrants into and out of Canada's three largest metropolitan areas. The study focuses on three broad questions: (1) Have the Canadian-born population and long-term immigrants become more likely to move away from, and less likely to move into, the three large urban areas in the last two decades, given the increased inflows of new immigrants? (2) Do these trends vary with education level, language and visible minority status? (3) To what extent is the level of in-flows of recent immigrants into the three metropolitan areas associated with the trends in out- and in-migration?

The results show that the three cities received fewer working-age internal migrants, both among the Canadian-born and long-term immigrants during the 1990s than in the 1980s. Toronto and Montreal also had fewer out-migrants in the later decade, although out-migration increased among the Canadian-born in Vancouver.

During the 1990s, both Toronto and Vancouver experienced a net loss of Canadian-born migrants among the less well-educated and non-visible minorities, but a net gain among those with a university education. Montreal had a net loss of the Canadian-born and long-term immigrants, mostly among Anglophones.

Growth in the immigrant population tended to be correlated with the increased out-migration rate among the less well-educated Canadian-born population in Toronto and Vancouver. In contrast, there was not a significant association between immigration growth and the decline in in-migration rates.

Keywords: immigration, internal migration

1. *Introduction*

The 1990s has witnessed significant increases in immigration in almost all western countries. This immigrant in-flow has, in most instances, become the largest component of national population growth and a major factor in social change. The destinations of these immigrants are also highly concentrated, adding to the uneven patterns of urban growth and change. Canada offers an interesting case study of these changes.

Between 1991 and 2000, Canada admitted 2.2 million immigrants, the highest intake of newcomers in any decade in the past 100 years. During the 1990s, the major source regions of immigrants shifted further from Europe to Asia and other Third World countries. The new sources of immigrants have led to the rapid increase in the level of socio-cultural diversity. A salient indication of such change is a three-fold increase in the country's visible minority (non-white, non-Aboriginal) population between 1981 and 2001.

The economic and socio-demographic impacts of changes in the size and pattern of immigration flows have been felt most strongly in three census metropolitan areas (CMAs): the "gateway" centres of Toronto, Vancouver, and Montreal. Immigrants who arrived in Canada in the 1990s were much more likely to settle in these areas than those who came in earlier decades. About 58% of immigrants who came to Canada in the previous 10 years lived in the three census metropolitan areas in 1981. By 2001, this proportion had increased to 74%. About 73% of Canada's total visible minority population was also concentrated in these three cities in 2001: 43% in Toronto, 18% in Vancouver, and 12% in Montreal (Statistics Canada, 2003).

The impacts of the concentration of new immigrants in a few large metropolitan areas have yet to be evaluated, but they are likely to be considerable. These effects can also be either mitigated or further augmented by the internal migration of the Canadian-born and earlier immigrants from and to these major immigrant gateway centres. The volume of net internal migration flows not only impinges on the uneven geographical distribution of population growth, but selective out- and in-migration may also influence spatial disparities in the socio-demographic composition of the country's population.

Recently, selective migration seems to be a common pattern in major immigrant gateway cities in the U.S. and Australia, and in some European countries: the domestic-born, the less well-educated in particular, are moving away and leaving behind a markedly more heterogeneous social environment that stands in contrast to the rest of the nation (Champion 1994; Frey 2002a; Ley 2003; The Economist 2003). Indeed, Frey (2002a) suggests that the differences in immigration and internal migration flows in the U.S. are transforming what was a once "single melting pot" nation into three distinct Americas: a suburb-like "New Sunbelt" region, a socially diverse and economically vibrant "Melting Pot" region, and an aging, whiter, and slow-growing "Heartland" region.

Objectives: This study examines trends in the internal migration of the Canadian-born and long-term immigrants into and out of Canada's three largest census metropolitan areas. Specifically, we ask the following questions: (1) Have the Canadian-born and long-term immigrants become

more likely to move away from and less likely to move into the three major immigrant gateway cities in the last two decades? (2) Do these trends vary with education level, language and visible minority status? (3) To what extent is the level of in-flows of recent immigrants into the three metropolitan areas associated with the trends in out- and in-migration? The paper concludes with a discussion of the implications of these trends and relationships.

2. *The Migration and Immigration Link—A Literature Review*

In the extensive literature on immigration and internal migration, there is a growing body of studies that focuses on the internal migration patterns into and out of major immigrant gateway cities and regions. Most of these are based on U.S. research. The most vocal and probably the most controversial in this field are a series of publications by Frey (1994, 1995a, 1995b, 1996, 2002a; Frey and Liaw 1998, 1999; Frey et al. 1996). He suggests that the concentration of new immigrants and the selective out-migration of the native-born are sharpening the geographic differences in racial and socio-demographic characteristics within the United States. Frey (2002a) argues that much of this selective migration of the native-born was a response to the high cost of living and desire for a suburban life-style that can no longer be met in the original suburbs in major metropolitan areas. These suburbs have become expensive, congested, and their populations are aging. As entire metropolitan areas that serve as immigrant gateways become distinct from the rest of the country in their socio-demographic makeup, domestic migrants are being drawn from their central cities as well as older suburbs.

Although for the most part, the out-migration of the native-born population from immigrant gateway areas may be life-style driven, Frey (1996, 2002b) suggests that low-income, less-educated native-born population are sensitive to the inflows of immigrants since they are most likely to be in direct competition with new immigrants for low-skill, low paying jobs. The perception of the higher social costs associated with increasing numbers of immigrants, including higher crime rates, reduced services, or increased taxes, combined with racial and ethnic prejudices, may also contribute to the selectivity of outward movement of the native-born population (Frey 2002b).

Frey's displacement hypothesis is based on the observation that the out-migration of low-skilled whites is persistent during the up-turns and down-turns in local economies and is prone to select non-metropolitan destinations (Frey 1995a, 1995b). In comparison, the internal migration of those with college education, who may be less affected by competition with the large numbers of new immigrants, is more closely tied to a region's general economic condition. Thus, while immigrant gateway areas in the U.S. sustained negligible or negative net internal migration over the last half of 1980s and early 1990s, they still gained college graduates, upper income households, and professionals from other parts of the country in periods of relatively strong economic growth.

Frey's displacement hypothesis has been contested by other researchers (Ellis and Wright 1998; Harrison 2002). The disagreement centers around whether immigrant concentration leads to selective internal migration, which remains "one of the most important unresolved questions about U.S. immigration" (Card 2001: 36). Some researchers have proposed alternative

explanations for the net out-migration of the native-born from major immigrant gateways centers. Walker, Ellis and Barff (1992) interpret their observation of a positive association between immigration to a Standard Metropolitan Statistical Area (SMSA) and a net loss of unskilled blue-collar workers as a result of economic restructuring in those global cities that also serve as immigrant gateways. They suggest that a shift from manufacturing to services and high-technology production leads to the out-migration of domestic blue-collar workers and the inflow of low-skilled immigrants. This explanation is further emphasized in a later study by Wright, Ellis and Reibel (1997).

A third potential explanation is related to housing prices. From his study on internal migration flows in Toronto and Sydney, Ley (2003) finds that housing market cycles may have much stronger effects than labour market conditions on the internal migration flows of the domestic-born. Bourne (1999, 2000) also suggests that some of Toronto's out-movers are actually equity-migrants, taking advantage of the equity built up in their housing through urban growth and the demands posed by high levels of immigrant inflows.

Studies in the U.S. that have examined the connection between immigration concentration and internal migration are primarily based on aggregate data at the state or metropolitan area level. From a correlation analysis of the relationship between immigration and native-born migration rates among 272 SMSAs from the 1980 census, Filer (1992) found a strong negative effect of immigrant arrivals on the attractiveness of the local labour market to native-born workers. This effect was concentrated among less skilled and less educated white workers. Borjas, Freeman and Katz (1997) found a positive correlation between the annual growth rate of the native-born and the growth rate of immigrants among U.S. states during the period from 1970 to 1990. However, this correlation became negative once a state's population growth pattern between 1960 and 1970 (that is, growth before large changes in immigration size and the shift in source regions) was taken into account.

In contrast, other studies found no support for the immigration-migration connection. White and Imai (1994) showed that the changes in in-migration and out-migration rates of the native-born across American SMSAs, between the late 1970s and late 1980s, were not significantly affected by the initial level and growth of immigrants in those SMSAs. In order to overcome the limitation of other studies that treat new immigrants as a homogeneous group, Card and DiNardo (2000) and Card (2001) examined the relationship between population movements of native-born workers in different skill groups with the inflow rates of less-skilled immigrant labour. Using data from the 1970, 1980 and 1990 censuses, they found that the intercity migration flows of native-born and established immigrant workers (who previously lived in the city) were insensitive to immigrant inflows in the same skill groups.

Research results based on micro-data are also ambiguous. From their analysis of the 1990 census, Frey et al. (1996) found that persons classified as living in poverty were more likely to move away from states with high levels of immigration. This impact was particularly strong for the white population. With pooled cross-sectional data from the 1981, 1984, 1987, and 1990 Current Population Survey, White and Liang (1998) modelled the probability of interstate in- and out-migration as a function of state and individual characteristics. They found that Non-Hispanic

white workers were more likely to move out from, and less likely to move into, states with high levels of recent immigrants. However, Kritz and Gurak (2001) found that both native-born and immigrant men were less likely to leave states with high immigration than they were to leave other states in the late 1980s. Although native-born, non-Hispanic white men tended to leave states with large numbers of Latin American and Caribbean immigrants, this relation became insignificant after controlling for differences in state economic situations.

In an attempt to account for the conflicting results of previous studies, Wright, Ellis and Reibel (1997) conducted an extensive testing of various model specifications. They found that the measurement of the size of the immigrant population, the sample chosen, and the formal educational attainment of the native-born workers, all affect the estimation of the impact of immigrants on native-born migration. Most importantly, they suggested that the few key immigrant gateway centres, primarily New York City and Los Angeles, stand out from other metropolitan areas in the immigration-migration linkage.

Similarly, Butcher and Card (1991) found that native-born in-migration flows were positively correlated with inflows of recent immigrants to most major metropolitan areas in the first half of the 1980s. But this was not the case for New York, Los Angeles, and Miami—the three most immigrant-intensive cities. Kritz and Gurak (2001) also observed that the association between the out-migration of Non-Hispanic white men and recent immigrants from Latin American and Caribbean resulted mostly from the outlier effects of California and Florida.

These results tend to indicate that the migration response of the native-born to immigration is likely a "large metropolitan area phenomenon" (Wright, Ellis and Reibel 1997). Similarly, Bourne (2000) observes that the immigration-migration link within Canada's urban system varies widely over both space and time. Nonetheless, in Canada's major metropolitan gateways, negative flows of internal migration are seemingly correlated with increased levels of immigration.

Since the linkage between immigrants and internal migrants may be limited to major gateway centres, Wright, Ellis, and Reibel (1997) suggest that a place-specific analysis would generate more meaningful interpretations of immigrant/native-born interactions in labour markets. Such analyses should focus on the socio-economic characteristics of the in-migrants to major immigrant gateway centres and how they fit together with immigrants and other native-born residents within the local labour market. It is also important to examine the populations who tend to move out from these immigrant magnets, where they move to and how they fare after the move.

No Canadian studies have adopted this place-specific approach to examining internal migration in major immigrant gateway cities. Some studies have investigated whether internal migration of immigrants leads to spatial dispersal or further concentration, how existing concentration affects immigrants' migration behaviours, and how immigrants are different from the native-born in the determinants of migration (Beaujot 2003; CIC 2000, 2001; Edmonston 2002; Lin 1998; Moore and Rosenberg 1995; Newbold 1996; Nogle 1994; Ram and Shin 1999; Trovato 1988). None of these studies, however, has devoted special attention to the internal migration of long-term

immigrants to and from major immigrant gateway centers. Furthermore, no studies have examined how the Canadian-born and immigrants differ in terms of their internal migration into and out of these gateways.

In this study, we take the approach of place-specific analyses suggested by Wright, Ellis and Reibel (1997) and focus on internal migration into and out of Canada's three largest census metropolitan areas (CMAs). The Toronto CMA has a higher proportion of immigrants in its population (44% in 2001) than other major urban centers in the U.S. (40% in Miami, 30% in Los Angeles and 23% in New York City in 2000), Australia (31% in Sydney in 2001), and Europe (15% in Paris in 1999 and 14% in London). Vancouver holds the second largest immigrant population. Like Toronto, Vancouver's proportion of immigrants (40%) is among the highest in all major urban centers world-wide. Montreal's immigrant population ranks third in size in the country, accounting for 18% of the city population. If the migration behaviours of the native-born and established immigrants are responsive to the concentration of immigrants, we should also observe an increased and selective net out-migration for the major Canadian cities, particularly in Toronto and Vancouver, probably more so than in the United States.

This study extends U.S. studies on the immigration-migration linkage by filling some of the gaps in the indices used and by adding insights from the Canadian literature. It also has advantages in terms of data and methods over previous U.S. studies. Most of the U.S. studies were based on the decennial census, which only contains migration data in the second half of each decade. In comparison, Canada conducts a census every five years. By pooling five censuses spanning the period from 1981 to 2001, we can examine the trend in internal migration flows in the 1980s and 1990s by education and visible minority status.

With access to the census 20% sample micro data files, we can further examine how economic restructuring, variations in housing prices, and an increase in the immigrant population affect the trend in internal migration. While many earlier studies have tended to examine only net migration or out-migration from immigrant gateways, this study demonstrates how in-migration and out-migration of the Canadian-born and long-term immigrants are associated differently with growth in the immigrant population.

3. *Data and Methods*

This study uses micro data from the 20% sample files from five censuses from 1981 to 2001. Internal migration status is drawn from the census question on place of residence "5 years ago" and pertains to movement over the five years prior to each census. Internal migrants were those who "lived in a different city, town, village, township, municipality or Indian reserve in Canada" five years prior to the census date (Statistics Canada 2002: 376). Out-migrants from a census metropolitan area (CMA) were those migrants who resided in the CMA five years prior to the census but did not live in the same CMA at the census date. In-migrants to a CMA included those migrants who resided outside of the CMA five years prior to the census. Changes in CMA boundaries between the two censuses were taken into account in defining the CMA of residence five years prior to the current census.

This study focuses on working age population between the ages of 25 and 64. Internal migrant status did not apply to those who resided in a foreign country five years prior to the census and to residents in collective dwellings (such as hospitals, senior homes, shelters, correctional institutions, etc.). These groups were excluded from the analysis. Aboriginals were also excluded since very few Aboriginals are immigrants and the Canadian-born Aboriginals presented a very small population share in the three CMAs.

For the Canadian-born and long-term immigrants (those who had lived in the country more than 5 years) separately, the following analyses first describe net-migration flows for each of the three largest CMAs over the period from 1976 to 2001. Then, multivariate logistic regression techniques are used to estimate out- and in-migration rates by education, home language, and visible minority status, while controlling for other socio-demographic characteristics and assuming the population composition remains the same over the entire study period. In estimating migration rates, the corresponding base populations for out-migration from a CMA are those who lived in the CMA five years prior to the census. The base populations for in-migration to a CMA are those who lived outside of the CMA five years prior to the census. Those who died or moved to another country between the two censuses are not included in the base population.

In the multivariate models, the independent variables include sex (men=1, women=0), age, family structure, education, home language, and visible minority status. Age is grouped into four categories: 25-34, 35-44, 45-54, and 55-64. Family structure is based on economic families and includes four categories: unattached individuals, lone-parent families, two or more adults without children, and two or more adults with children. Education level includes four categories: with a university degree, some post-secondary, high school graduation, and less than high school. Home language includes English, French, and all others. Visible minority status includes non-visible minorities (whites) and visible minorities.[1] The last category in each of the above categorical variables is used as the reference base. We do not include individuals' labour market characteristics, such as employment status, occupation and income in the models since they were measured after migration and thus could be the outcomes rather than determinants of that migration.

In the models for immigrants, we also include period of immigration (by five-year intervals: before 1970, 1971-75, 1976-80, 1981-85, 1986-90, 1991-95) and the years since immigration, to examine cohort and assimilation effects.

To compare migration rates between the 1990s and earlier decades, a dummy variable Ninety (1 if in the 1996 and 2001 census vs. zero in the 1981, 1986, and 1991 census) is created. We further include the interaction terms between Ninety and each of three focal independent variables—education, home language, and visible minority status. These interactions allow us to

1. Visible minorities are defined by the Employment Equity Act as "persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in color." The regulations that accompany the Act identify the following visible minority groups: Chinese, South Asians, Blacks, Arab/West Asians, Filipinos, Southeast Asians, Latin Americans, Japanese, Koreans, and others (Kelly 1995).

examine whether internal migration flows were more selective during the 1990s than in the 1980s.

The third section compares the effects of economic restructuring, housing market conditions, and immigrant in-inflows in a CMA on the trends in internal migration from and to that CMA. The average increase in the percentage of the labour force in quaternary occupations—defined here as managerial and professional jobs—over the five-year census period in the metropolitan area, is used as an indicator of change in local economic conditions.[2] The five-year average of Statistics Canada's new housing price index[3] is used as an indicator of change in housing market conditions. The percent of recent immigrants (i.e., living in Canada five years or less) in the total immigrant population is used to represent the increase in the immigrant population during each census period.

Using a model that contains all of the selected individual-level variables and Ninety as the base, we can compare how the three aggregate variables affect the changes in the in- and out-migration rates between the 1980s and 1990s. We also include the interaction terms between each of these aggregate variables and each of our three focal individual level variables—education, home language, and visible minority status. These interactions allow us to examine whether the associations between these aggregate variables and the propensity of migration vary across population groups. According to the literature, we would expect that economic restructuring, higher housing prices and larger immigrant inflows are associated with increased out-migration rates and reduced in-migration rates, particularly among the less well-educated.

4. *Empirical Results*

4.1 Internal Migration of the Canadian-born

Internal migration of the Canadian-born seems to have different impacts on the three CMAs. It increases the education level and the degree of social diversity in Toronto and Vancouver, but these effects are not as clear in Montreal. In this section, we examine each of these cities in turn.

The Toronto CMA, on balance, has lost the Canadian born through domestic migration exchanges since the second half of the 1980s (Table 1). Against this general trend, Toronto gained university-educated migrants in both the 1980s and 1990s. Meanwhile, Toronto lost Canadian-born migrants with less than university education in both the 1980s and 1990s. This may reflect a tendency, noted in several U.S. studies, for the displacement of lower skilled workers through competition in the labour market from immigrants. The net loss in internal

2. Some other studies use the actual percentage of the labour force in quaternary occupations in a particular year as the indicator of economic restructuring (e.g., Ley and Tutchener 2001). However, as the result of changes in occupational classification systems, even the broad quaternary occupations were not compatible over the entire study period. But we do have the same occupational classification for at least two adjacent censuses and we can compute changes in the percent over each census period using compatible definitions. For a single city, the change in the percent is probably a better indicator of the process of restructuring than the percent per se.

3. Although the index does not cover all house sales, it correlates closely with the average house prices compiled by Canadian Real Estate Association. We did not have a complete series for the latter source.

migrants during the 1990s was also concentrated among Anglophones and among non-visible minorities.

Table 1. Net internal migrants among the Canadian-born by education, home language and visible minority status, population age 25 to 64

	1976-1981	1981-1986	1986-1991	1991-1996	1996-2001
Toronto					
Total	-14,280	25,680	-73,750	-52,680	-24,160
Education					
< High school	-13,140	-2,850	-23,770	-15,400	-10,780
High school graduation	-2,570	1,580	-14,460	-8,930	-7,590
Some post-secondary	-5,900	10,200	-38,240	-29,400	-18,920
University degree	7,330	16,740	2,720	1,060	13,130
Home Language					
Non English/French	-30	240	460	-210	160
English	-13,480	24,920	-72,290	-51,140	-24,420
French	-770	520	-1,920	-1,330	110
Visible minority status					
Visible minority	90	960	930	-70	2,220
Non-visible minority	-14,370	24,720	-74,680	-52,610	-26,380
Montreal					
Total	-51,100	8,850	-23,750	-30,880	-11,830
Education					
< High school	-15,510	-1,840	-10,940	-9,790	-4,790
High school graduation	-7,710	2,000	-5,430	-4,970	-3,140
Some post-secondary	-18,960	6,750	-5,710	-11,540	-3,810
University degree	-8,920	1,940	-1,660	-4,570	-80
Home Language					
Non English/French	-190	-30	-100	-60	-150
English	-39,820	-15,240	-14,230	-17,090	-15,940
French	-11,080	24,120	-9,420	-13,720	4,250
Visible minority status					
Visible minority	-330	-390	-540	-690	-1,210
Non-visible minority	-50,770	9,240	-23,200	-30,180	-10,620
Vancouver					
Total	1,230	11,370	11,150	-6,440	-19,290
Education					
< High school	-2,880	1,110	-1,120	-4,490	-5,400
High school graduation	-740	1,110	30	-2,840	-2,520
Some post-secondary	1,680	6,450	6,820	-6,090	-12,080
University degree	3,180	2,700	5,420	6,980	720
Home Language					
Non English/French	-40	70	270	310	-40
English	1,150	11,510	11,000	-6,990	-18,820
French	120	-210	-120	240	-420
Visible minority status					
Visible minority	240	170	760	930	710
Non-visible minority	1,000	11,200	10,400	-7,370	-20,000

Note: All numbers were rounded to the nearest 10.
Source: The 1981 to 2001 census 20% sample micro files.

Similarly, Vancouver gained Canadian-born migrants with university education and among visible minorities in both the 1980s and 1990s. This city started to experience a net loss of the Canadian-born migrants in the early 1990s. The net loss in the 1990s was concentrated among people with less than university education, non-visible minorities, and Anglophones.

In comparison, Montreal lost Anglophones in both the 1980s and 1990s, while its dominant language group,[4] Francophones, had basically balanced net migration flows over the entire study period. This city never had a significant gain in migrants with university education. While the other two cities more or less gained visible minorities, Montreal lost them.

Since net migration flows do not reveal the migration propensity of population groups and the different contributions from in- and out-migration, we now turn to an examination of migration rates. Table 2 presents the estimated average five-year out- and in-migration rates for the Canadian-born[5] in the three metropolitan areas.

In-migration rates tended to increase with the level of education, and thus with the level of human capital (Table 2). The difference among out-migrants by education level, in contrast, was not as pronounced, and this difference became even smaller in the 1990s than in the 1980s. Thus, while these cities received disproportionately more university-educated in-migrants, out-migrants from these cities were increasingly less selective by education.

In all three cities, the Canadian-born population who did not speak either official language at home tended to have lower out-migration rates than those who spoke an official language. This is suggestive of the ability of gateway centers to retain non-charter language groups. However, these cities did not disproportionately attract in-migration of those who did not speak either official language. Their in-migration rate was lower than the dominant language group, that is, Anglophones in Toronto and Vancouver and Francophones in Montreal. Between those who spoke one of the official languages, Francophones tended to have high out-migration rates and very low in-migration rates in Toronto and Vancouver. The same is true for Anglophones in Montreal.

In Toronto and Vancouver, visible minorities had a lower out-migration rate but higher in-migration rate than non-visible minorities, suggesting the attraction of racial and cultural diversity in those metropolitan areas. Montreal's visible minorities also had a lower out-migration rate than non-visible minorities, but these two groups were not much different with respect to in-migration rates.

In terms of changes over time, Canadian-born migrants were much less likely to move into the three CMAs in the 1990s than in the 1980s (Table 2). This decline in in-migration rate was widespread across education levels, language types and racial groups. Only in Toronto and

4. Among the working age Canada-born population, 81.3% spoke French only or both French and English at home in Montreal in the 1981 census, 82.5% in the 1991 census, and 83.2% in the 2001 census.

5. These estimates are based on regression model 1 for out-migration and in-migration in Appendix 1 to 3.

Vancouver did the in-migration rate among visible minorities remain stable or increase slightly between these two periods.

Table 2. Estimated average five-year out- and in-migration rates (%) by education, home language and visible minority status, the Canadian-born population age 25 to 64

	Out-migration		In-migration	
	1976-1991	1991-2001	1976-1991	1991-2001
Toronto				
Total	10.2	9.3	1.2	0.8
Education				
< High school	8.6	9.0	0.7	0.5
High school graduation	7.9	7.6	0.8	0.6
Some post-secondary	11.0	10.0	1.1	0.7
University degree	12.1	9.6	3.1	2.2
Home Language				
Non English/French	2.2	3.5	1.3	0.5
English	10.1	9.3	1.6	1.2
French	38.1	32.8	0.2	0.1
Visible minority status				
Visible minority	5.2	3.1	2.2	2.3
Non-visible minority	10.4	9.6	1.2	0.8
Montreal				
Total	6.9	6.1	1.0	0.8
Education				
< High school	6.0	5.8	0.5	0.5
High school graduation	5.8	5.1	0.8	0.6
Some post-secondary	6.6	5.8	1.1	0.8
University degree	10.8	8.6	1.9	1.5
Home Language				
Non English/French	1.9	1.9	0.6	0.4
English	13.1	10.0	0.2	0.1
French	5.6	5.3	3.6	3.2
Visible minority status				
Visible minority	3.3	4.4	1.0	0.7
Non-visible minority	6.9	6.1	1.0	0.8
Vancouver				
Total	10.4	11.0	0.7	0.5
Education				
< High school	9.1	11.0	0.5	0.3
High school graduation	7.5	8.5	0.5	0.4
Some post-secondary	10.5	11.2	0.8	0.5
University degree	14.4	13.1	1.1	1.0
Home Language				
Non English/French	7.7	8.3	0.5	0.3
English	10.2	10.9	1.0	0.7
French	41.7	44.8	0.1	0.0
Visible minority status				
Visible minority	3.9	2.7	1.3	1.3
Non-visible minority	10.8	11.6	0.7	0.5

Note: The estimated average five-year migration rates were calculated by holding constant age, family structure, education, home language, and visible minority status, using the average of the Canadian-born who were included in the model. The at-risk population for out-migration is the CMA population at the beginning of the period, while the at-risk population for in-migration is the population of the rest of the country at the beginning of the period.
Source: The 1981 to 2001 census 20% sample micro files.

4.2 Internal Migration of Long-term Immigrants

Our analyses show that the internal migration of long-term immigrants tends to increase the education level and social diversity of Toronto and Vancouver's working age population, even more so than the effect of internal migration among the Canadian-born. Toronto gained immigrants with a university education and visible minorities in both the 1980s and 1990s (Table 3). Toronto's net loss of immigrant migrants in the 1990s was concentrated among those with less than university education, as well as Anglophones and non-visible minority immigrants. Vancouver gained immigrants in both the 1980s and 1990s, and the gain was concentrated among those with university education, allophones, and visible minorities.

The effect of the internal migration of immigrants was the opposite in Montreal. Montreal lost immigrants in both the 1980s and 1990s (Table 3). The net loss was heavily concentrated among those with university or some post-secondary education. The net loss was also concentrated among allophone and Anglophone immigrants, and increasingly among visible minorities. Furthermore, long-term immigrants contributed significantly to the city's total net loss in internal migrants in the 1990s. For instance, immigrants accounted for about 41% of Montreal's net loss of internal migrants in period from 1996 to 2001, compared with 12% in Toronto.

Long-term immigrants tended to have much lower out-migration rates but higher in-migration rates than the Canadian-born for both Toronto and Vancouver (Table 4).[6] This suggests that internal migration increases the concentration of immigrants relative to the Canadian-born in these two cities. In comparison, immigrants on average were much less likely to move into Montreal than the Canadian-born. Although immigrants also had lower out-migration rates than the Canadian-born in Montreal, the relative gap was much larger in in-migration rates.

Among long-term immigrants, higher levels of education are associated with higher out- and in-migration rates. However, the difference by education level became smaller for out-migration rates, mostly due to the decline in the out-migration rate among immigrants with university education. The difference by education level also decreased for in-migration rates in Montreal during the 1990s.

In Toronto and Vancouver, immigrants who did not speak an official language at home tended to have much lower out-migration rates than Anglophones, while their in-migration rates were often similar. This confirms the ability of these two gateway cities to retain populations through their cultural and linguistic diversity. Francophone immigrants in both cities tended to have very high out-migration rates but close to zero in-migration rates. In either case, their population size was very small and they made a minimum contribution to the total migration flow. In Montreal, Francophone immigrants have much lower out-migration rates but higher in-migration rates than Anglophone and allophone immigrants. This identifies Montreal, as expected, as the primary magnet for Francophone immigrants.

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6. These migration rates are estimated from regression model 1 for out-migration and in-migration in Appendix 4 to 6.

Table 3. Net migrants among long-term immigrants by education, home language and visible minority status, population age 25 to 64

	1976-1981	1981-1986	1986-1991	1991-1996	1996-2001
Toronto					
Total	-7,690	12,160	-8,970	-9,790	-3,190
Education					
< High school	-3,800	2,640	-2,770	-2,190	-1,450
High school graduation	-810	720	-2,080	-1,630	-1,010
Some post-secondary	-4,520	4,310	-7,090	-6,320	-4,000
University degree	1,440	4,470	2,960	360	3,260
Home Language					
Non English/French	-1,570	5,660	5,050	700	3,190
English	-6,300	6,260	-14,010	-10,570	-6,510
French	180	240	-20	90	130
Visible minority status					
Visible minority	-350	7,770	7,680	1,150	5,140
Non-visible minority	-7,340	4,390	-16,630	-10,890	-8,290
Montreal					
Total	-15,770	-5,050	-4,850	-7,310	-8,230
Education					
< High school	-4,010	-240	-520	-1,400	-810
High school graduation	-1,780	-380	-320	-840	-700
Some post-secondary	-9,180	-2,500	-2,430	-3,750	-3,680
University degree	-4,820	-2,180	-2,100	-2,720	-3,850
Home Language					
Non English/French	-4,150	10	-710	-2,860	-3,850
English	-14,920	-6,170	-4,200	-4,920	-4,800
French	-710	870	-470	-930	-390
Visible minority status					
Visible minority	-4,630	-1,730	-2,500	-4,550	-5,630
Non-visible minority	-15,150	-3,570	-2,880	-4,150	-3,420
Vancouver					
Total	4,620	3,940	7,880	9,820	390
Education					
< High school	180	710	1,370	2,320	20
High school graduation	410	470	760	840	-240
Some post-secondary	2,160	2,050	3,820	3,210	-220
University degree	1,870	710	1,920	3,450	830
Home Language					
Non English/French	2,090	1,320	3,500	6,850	1,560
English	2,490	2,630	4,370	2,800	-1,290
French	30	-10	10	170	120
Visible minority status					
Visible minority	2,670	1,920	5,690	9,520	3,110
Non-visible minority	1,950	2,010	2,180	340	-2,710

Note: All numbers were rounded to the nearest 10.
Source: The 1981 to 2001 census 20% sample micro files.

Table 4. Estimated average five-year out- and in-migration rates (%) by education, home language and visible minority status, long-term immigrants, age 25 to 64

	Out-migration		In-migration	
	1976-1991	1991-2001	1976-1991	1991-2001
Toronto				
Total	4.17	3.42	2.20	1.48
Education				
< High school	2.56	2.62	1.47	1.07
High school graduation	3.56	3.07	1.84	1.21
Some post-secondary	4.86	3.81	2.18	1.35
University degree	6.21	4.32	3.78	2.66
Home Language				
Non English/French	2.38	2.38	2.13	1.36
English	5.19	3.99	2.46	1.70
French	9.77	9.52	0.01	0.01
Visible minority status				
Visible minority	2.61	2.16	3.29	2.08
Non-visible minority	5.23	4.27	1.77	1.24
Montreal				
Total	5.41	4.15	0.42	0.26
Education				
< High school	3.00	2.79	0.28	0.23
High school graduation	3.67	2.92	0.36	0.22
Some post-secondary	6.48	4.43	0.40	0.23
University degree	9.03	6.90	0.78	0.43
Home Language				
Non English/French	3.41	3.14	0.46	0.27
English	10.97	7.12	0.25	0.13
French	1.94	2.19	7.29	6.29
Visible minority status				
Visible minority	4.67	4.50	0.51	0.29
Non-visible minority	5.81	3.96	0.38	0.25
Vancouver				
Total	5.39	5.19	0.83	0.76
Education				
< High school	4.44	5.13	0.50	0.60
High school graduation	4.21	4.80	0.67	0.55
Some post-secondary	5.33	5.03	0.99	0.79
University degree	7.61	5.89	1.19	1.12
Home Language				
Non English/French	4.04	4.11	0.75	0.83
English	6.11	5.77	0.94	0.78
French	14.23	10.00	0.01	0.00
Visible minority status				
Visible minority	3.42	2.78	0.94	0.98
Non-visible minority	7.23	7.43	0.78	0.66

Note: The estimated average five-year migration rates were calculated by holding constant age, family structure, education, home language, and visible minority status using the average of long-term immigrants who were included in the model. Also see the note for Table 2.

Source: The 1981 to 2001 census 20% sample micro files.

What of the visible minority immigrants? In Toronto and Vancouver, visible minority immigrants tended to have a lower out-migration rate but higher in-migration rate than non-visible minority immigrants. In comparison, in Montreal, visible minority and non-visible immigrants had similar out-migration rates, while the in-migration rate was slightly higher among visible minorities.

In terms of change over time, both out- and in-migration rates among immigrants decreased in the 1990s in all three cities. However, this decline was not uniform across population characteristics. In particular, the out-migration rate among immigrants with less than high school education increased in both Toronto and Vancouver.

4.3 The Effects of Economic Restructuring, Housing Prices and Level of Immigration

The literature reviewed above hypothesizes that economic restructuring, housing price variation, and the size and rate of growth of the immigration population are potential factors affecting the in- and out-migration rates for groups living in the major immigrant gateway cities. This section evaluates whether these city-level factors are associated with the changes in internal-migration patterns between the 1980s and 1990s in Canada's three largest metropolitan areas.

During the 1980s and 1990s, the three cities showed similar trends in terms of the inflows of recent immigrants. The rate of increase in their immigrant populations picked up rapidly between the mid-1980s and the beginning of the 1990s in response to changes in federal immigration policies that made immigration easier. The rate continued to rise until the mid-1990s, then fell back at the end of the decade.

In terms of economic restructuring, common to the three cities, the overall increase in the share of quaternary occupations in the labour force was much slower in the 1990s than in the 1980s. Interestingly, the largest five-year increase in the share of quaternary occupations in the labour force occurred in the 1976-1981 period in Vancouver, in the 1981-1986 period in Montreal, and in the 1986-1991 period in Toronto. These differences in part reflect variations in regional business cycles (Simmons and Bourne 2003).

In regard to variations in housing price, Toronto experienced a steady increase in average prices from the end of the 1970s to the mid-1980s, a boom in the end of 1980s, a fall back in the early 1990s, and a slow recovery by the end of 1990s. In Vancouver, with the exception of a short 1980-1981 boom, the housing price index showed an overall small increase until the end of the 1980s. The average price rose rapidly in the early 1990s and then it fell in the late 1990s. The increase in housing prices in Montreal, which have been much lower than in either Vancouver or Toronto, was relatively steady until the mid-1990s when it then slowed. It has since picked up again after 2000.

Since the multivariate models are based on pooled data from five consecutive censuses, there are only five observations for each of these city-level variables. Because of this limitation, we do not put the three city-level variables in the same model. Otherwise, estimates of the coefficients for

the three variables plus the Ninety variable in the same model would rely on only one degree of freedom. Instead, these variables are added one at a time to the basic model (Model 1 in Appendix 1 to 6). The same set of models is estimated separately for out- and in-migration among the Canadian-born population and long-term immigrants in Toronto, Montreal, and Vancouver. The logistic models are presented in Appendix 1 to 6. Based on these regression models, Table 5 summarizes the effects of economic restructuring, housing price variation, and immigration growth on changes in out- and in-migration rates.

Even with this simplistic approach, however, none of these factors can consistently explain the changes in the inter-migration patterns between the 1980s and 1990s in the three cities. The migration-immigration regimes in all three urban areas are complex, the differences often small and the relationships subtle.

Table 5. Estimated average five-year out- and in-migration rates (%) for population age 25 to 64, showing the effects of economic restructuring, housing price variation, and immigration growth

	The Canadian-born population				Long-term immigrants			
	Out-migration		In-migration		Out-migration		In-migration	
	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001
Toronto								
Base model	10.2	9.3	1.2	0.8	4.2	3.4	2.2	1.5
Controlling for:								
Economic restructuring	9.1	10.8	1.3	0.7	4.0	3.6	2.2	1.4
Housing price variation	10.9	8.5	1.1	0.9	4.2	3.4	2.2	1.6
Immigration growth	11.1	8.2	1.1	0.9	4.4	3.1	2.1	1.6
Montreal								
Base model	6.9	6.1	1.0	0.8	5.4	4.2	0.4	0.3
Controlling for:								
Economic restructuring	8.2	4.3	0.8	1.0	7.1	2.1	0.3	0.4
Housing price variation	6.7	6.3	0.9	0.8	4.8	5.6	0.4	0.3
Immigration growth	7.0	5.9	0.9	0.8	5.3	4.4	0.4	0.3
Vancouver								
Base model	10.4	11.0	0.7	0.5	5.4	5.2	0.8	0.8
Controlling for:								
Economic restructuring	10.4	11.0	0.7	0.5	5.3	5.4	0.8	0.7
Housing price variation	10.6	10.6	0.8	0.5	5.0	5.5	1.0	0.6
Immigration growth	10.9	10.4	0.8	0.5	5.3	5.2	0.9	0.6

Note: The estimated average five-year migration rates were calculated by holding constant age, family structure, education, home language, and visible minority status, using the average of individuals who were included in the model.
Source: The 1981 to 2001 census 20% sample micro files.

When economic restructuring was controlled for, Toronto's out-migration rate among the Canadian-born increased rather than decreased between the 1980s and 1990s (Table 5). This effect suggests that the slowing down of occupational restructuring during the 1990s was associated—possibly as both cause and effect—with the decline in the out-migration rate. But the same did not apply to the in-migration rate, which became slightly smaller during the 1990s when economic restructuring was controlled for.

After controlling for both housing prices and the growth of the immigrant population, Toronto's out-migration rate decreased further. In particular, before controlling for immigration growth and housing prices, the out-migration rate among those with less than high school education rose between the 1980s and 1990s (as in Table 2). After control, the rate fell (Appendix 7). In comparison, the change in the out-migration rate among those with university education was not affected by controlling for these two city-level factors. These findings suggest that the large growth of immigrants in the 1990s and housing price variations were related to the rise in the out-migration rate among the less well-educated Canadian-born population. Meanwhile, variations in housing prices and the growth of the immigrant population had very small effects on the change in the in-migration rate.

In contrast to Toronto, the slowdown in economic restructuring tended to reduce the decline in out-migration rate among the Canadian-born in Montreal during the 1990s, but contributed to the decline in the in-migration rate (Table 5). Also different from the patterns in Toronto, changes in house prices and the level of immigration, both of which are lower in Montreal, had a very small effect on that city's overall out- and in-migration rate.

In Vancouver, the slowdown in economic restructuring also had little impact on the trends in the out- and in-migration rates among the Canadian-born. Higher housing prices and in particular, the higher rate of growth in immigration during the 1990s, contributed to the increase in Vancouver's out-migration rate, mostly among those with less than university education (see Appendix 7). In particular, after controlling for immigration growth, the out-migration rate among those with less than university education fell between the 1980s and the 1990s. But the trends in housing prices and immigration growth had minor effects on the change in the in-migration rate among Vancouver's Canadian-born population (Table 5).

The effects of the three city-level variables among immigrants (right panel in Table 5) were generally weak in Toronto. These variables also had only small effects on the in-migration rate among immigrants in Montreal and Vancouver. The slowdown in the level of economic restructuring tended to reduce the decline in the out-migration rate of immigrants for Montreal in the 1990s. Housing price variations were related to the decline in out-migration rates among immigrants in both Montreal and Vancouver.

5. Conclusions

Analyses of micro-data from five consecutive censuses covering the period between 1981 and 2001 found specific trends in the relationships between migration and immigration that are similar in Canada's three large metropolitan areas. While continuing to attract an increasing

proportion of international immigrants to Canada, the three cities have become less engaged in population exchanges with the rest of the country. In particular, they received fewer internal migrants, both among the Canadian-born and long-term immigrants, in the 1990s than in the 1980s. Toronto and Montreal also sent out fewer migrants during the 1990s than in the 1980s.

Other than this common trend, the net migration flows by population characteristics were significantly different across the three cities. First, among the Canadian-born working age population, Toronto experienced a net loss of the less well-educated, non-visible minorities, and Anglophones, but continued to gain people with a university degree. Vancouver had a net gain of Canadian-born migrants in most categories of education, home language, and visible minority status in the 1980s, but only had net gains among the university educated and visible minorities in the 1990s. Montreal had a net loss of Canadian-born migrants in both the 1980s and 1990s, mostly among Anglophones.

The patterns of internal migration among long-term immigrants were also different in the three cities. In the 1990s, Toronto lost immigrants who were non-visible minority, Anglophone, and less well-educated. But the net loss was small and had only a minor effect in reducing the level of immigrant concentration in Toronto. Vancouver gained immigrants among most sub-groups of education, language, and visible minority status in the 1980s and early 1990s; although in the late 1990s the gain was small. The gain in long-term immigrants through internal migration tended to increase the concentration of immigrants in Vancouver.

In comparison, Montreal had an overall large net loss of long-term immigrants, although the loss of Francophone immigrants was small. The net loss of immigrants through internal migration led to the dispersal of immigrants from Montreal. Detailed tabulations show that over the entire study period, more long-term immigrants moved into, than away from, Montreal through intra-provincial migration[7]. The net loss of immigrants in Montreal was the result of inter-provincial migration—Montreal sent more long-term immigrants to other provinces than the city received.[8]

Internal migration, as a result, tends to increase the level of social diversity and the education level of the labour force in Toronto and Vancouver. Meanwhile, internal migration helps to maintain Montreal's concentration of Francophones and reduces the education level of the city's immigrant labour force. Montreal's unique internal migration pattern relative to the other two cities may partly reflect that Montreal is relatively less important as an immigrant gateway centre. The share of immigrants in Montreal's total population is similar to the Canadian average, while Toronto and Vancouver have much higher proportions of immigrants than, for example, in New York City and Los Angeles.

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7. For instance, in the five years prior to the 1996 census, 3,170 working age long-term immigrants moved from Montreal to other areas within Quebec, while 3,290 moved into Montreal from other areas within the province. The corresponding numbers in the five years prior to the 2001 census are 3,130 and 4,940.

8. In each of the two census periods of the 1996 and 2001 censuses, Montreal had a net loss of more than 10,000 working age long-term immigrants through inter-provincial migration.

Growth in the recent immigrant population seems to be correlated closely with the increased out-migration rate among the less well-educated Canadian-born in Toronto and Vancouver—Canada's two major immigrant gateway centers. To a degree, this confirms the displacement hypothesis with respect to low-skilled and less well-educated populations. On the other hand, the association between immigration growth and in-migration rates is not significant across CMAs. In most cases, the effects of housing price variation are similar to those of immigration growth. This may reflect the fact that immigration growth and housing price variation are highly correlated (Ley and Tutchener, 2001), and thus it is difficult to separate their independent associations with the changes in out-migration rates. The effect of economic restructuring, at least as measured here, is usually small and not consistent across cities.

More broadly, the results both confirm and contradict a number of the assertions in the contemporary literature on the relationships between domestic migration and immigration. Higher levels of immigration are associated with increased out-migration among the less well-educated domestic-born population, but the association may be due to other reasons such as the differences in levels of housing price variations among metropolitan areas. Furthermore, growth in the immigration population does not appear to discourage in-migration. Thus, higher immigration flows are unlikely to be the major factor affecting the change in net migration flows in major gateway cities.

The paper also illustrates the importance of comparing the migration behaviour of long-term immigrants and native-born populations, and the necessity to examine differences in the attributes of the specific population groups involved in the migration process. Finally, analyses of the migration-immigration link, as this study of the three largest Canadian metropolitan areas confirms, must be grounded in an understanding of the inherited characteristics and population dynamics of the particular locale under study.

There is, in effect, no single explanation, no single line of association, for the dynamics of population movements for the native-born and long-term immigrant population into and out of Canada's three largest metropolises. The relationships, instead, are complex, multi-dimensional, and subject to change.

Appendix 1. Logistic regressions showing the association of migration status with individual socio-demographic characteristics and city-level factors, the Canadian-born population age 25 to 64, Toronto

	Out-migration				In-migration			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Intercept	-5.010	-5.045	-5.232	-5.419	-6.272	-7.986	-7.621	-6.925
Male	0.040	0.039	0.039	0.040	-0.044	-0.043	-0.044	-0.045
University degree	0.375	1.093	0.874	0.812	1.482	0.897	1.166	1.276
Some post-secondary	0.274	0.520	0.300	0.332	0.590	0.463	0.631	0.636
High school graduation	-0.092	-0.119	-0.195	-0.125	0.325	0.504	0.551	0.473
English	1.917	1.843	1.881	1.872	0.232	1.538	1.428	1.088
French	3.613	3.125	3.328	3.427	-2.567	-1.793	-1.533	-1.744
2+ adults, no kids	-0.262	-0.267	-0.272	-0.271	0.590	0.597	0.605	0.600
Unattached individual	0.058	0.054	0.049	0.047	1.124	1.132	1.139	1.135
One adult with kids	0.245	0.243	0.237	0.234	0.180	0.187	0.194	0.191
Age 25-34	0.021	0.023	0.019 n	0.016 n	1.804	1.801	1.806	1.809
Age 35-44	0.025	0.019 n	0.010 n	0.010 n	1.135	1.141	1.154	1.152
Age 45-54	-0.324	-0.326	-0.326	-0.325	0.526	0.531	0.536	0.534
Non-visible minority	0.815	0.312	0.529	0.596	-0.316	0.641	0.306	-0.059 n
Ninety	-0.055 n	-0.007 n	-0.136 n	-0.186 n	-0.505	0.846	-0.804	-0.663
Ninety*University degree	-0.298	-0.907	-0.079	-0.071	0.193	0.701	0.028 n	0.062
Ninety*Some post-secondary	-0.155	-0.368	-0.095	-0.067	0.038 n	0.158	0.017 n	0.017 n
Ninety*High school graduation	-0.104	-0.086 n	-0.082	-0.047 n	-0.047 n	-0.201	0.008 n	-0.025 n
Ninety*English	-0.346	-0.286 n	-0.376	-0.386	0.236	-0.826	0.575	0.518
Ninety*French	-0.483	-0.069 n	-0.636	-0.600	0.349	-0.262 n	0.623	0.619
Ninety*Non-visible minority	0.460	0.881	0.335	0.322	-0.185	-0.961	0.006 n	-0.071 n
Restructuring		0.444 n				12.021		
Restructuring*University degree		-5.533				4.549		
Restructuring*Some post-second		-2.006				1.098		
Restructuring*High school grad		0.029 n				-1.222		
Restructuring*English		0.602 n				-9.489		
Restructuring*French		3.813 n				-5.468		
Restructuring*Non-visible minority		3.752				-6.881		
Housing prices			0.003 n				0.016	
Housing prices*University degree			-0.007				0.005	
Housing prices*Some post-sec			-0.001				0.000 n	
Housing prices*High school grad			0.001 n				-0.003	
Housing prices*English			0.001 n				-0.015	
Housing prices*French			0.004 n				-0.013	
Housing prices*Non-visible minority			0.004				-0.008	
Immigrant growth				1.844				2.751
Immigrant growth*University deg				-2.1882				1.120
Immigrant growth*Some post-sec				-0.4481				-0.112 n
Immigrant growth*High school grad				-0.0508 n				-0.597
Immigrant growth*English				0.3076 n				-3.898
Immigrant growth*French				1.0322 n				-3.743
Immigrant growth*Non-visible min				1.1738				-1.266
Pseudo R squared	2.3%	2.4%	2.5%	2.7%	13.9%	13.9%	14.0%	14.0%
Increase in Chi-squared		829	1,926	3,183		629	1,451	1,666

Note: n- not significant at p =.05

Source: Pooled data from 1981, 1986, 1991, 1996, and 2001 census 20% micro data files.

Appendix 2. Logistic regressions showing the association of migration status with individual socio-demographic characteristics and city-level factors, the Canadian-born population age 25 to 64, Montreal

	Out-migration				In-migration			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Intercept	-4.786	-5.060	-5.763	-5.249	-6.968	-7.334	-8.572	-7.968
Male	0.036	0.036	0.035	0.036	0.001 n	0.001 n	0.001 n	0.000 n
University degree	0.609	0.693	1.060	0.938	1.235	1.286	1.122	1.126
Some post-secondary	0.119	0.295	0.369	0.292	0.637	0.550	0.645	0.685
High school graduation	-0.020 n	0.273	0.215	0.086 n	0.376	0.432	0.546	0.466
English	2.165	2.212	3.301	2.922	-0.839	0.037 n	0.647 n	-0.103 n
French	1.239	1.329	1.401	1.157	2.191	2.608	3.272	2.890
2+ adults, no kids	-0.191	-0.182	-0.187	-0.192	0.452	0.448	0.454	0.457
Unattached individual	0.166	0.172	0.168	0.163	1.133	1.130	1.136	1.140
One adult with kids	0.104	0.110	0.103	0.099	0.718	0.713	0.719	0.724
Age 25-34	0.126	0.122	0.131	0.129	1.447	1.450	1.447	1.449
Age 35-44	0.112	0.115	0.120	0.111	0.893	0.893	0.896	0.901
Age 45-54	-0.138	-0.141	-0.136	-0.139	0.367	0.369	0.368	0.372
Non-visible minority	0.506	1.183	0.911	0.484	-0.357	-0.907	0.156 n	0.237 n
Ninety	0.303	0.524 n	-0.258 n	0.169 n	0.099 n	0.406 n	-0.512	0.017 n
Ninety*University degree	-0.194	-0.257	0.039 n	-0.103	0.020 n	-0.029 n	-0.039 n	-0.022 n
Ninety*Some post-secondary	-0.124	-0.265	0.016 n	-0.066	-0.071	-0.004 n	-0.071	-0.080
Ninety*High school graduation	-0.140	-0.382	-0.013 n	-0.103	-0.146	-0.194	-0.058 n	-0.135
Ninety*English	-0.293	-0.331 n	0.350	-0.131 n	-0.300	-1.022	0.323 n	-0.202 n
Ninety*French	-0.036 n	-0.110 n	0.010 n	-0.068 n	0.025 n	-0.314 n	0.438	0.117 n
Ninety*Non-visible minority	-0.222	-0.788	0.072 n	-0.194	-0.244	0.209 n	-0.048 n	-0.174
Restructuring		2.740 n				3.640 n		
Restructuring*University degree		-0.769 n				-0.492 n		
Restructuring*Some post-second		-1.712				0.823 n		
Restructuring*High school grad		-2.933				-0.495 n		
Restructuring*English		-0.582 n				-8.534		
Restructuring*French		-0.923 n				-4.177 n		
Restructuring*Non-visible minority		-6.666				5.275		
Housing prices			0.015				0.022	
Housing prices*University degree			-0.00669				0.002	
Housing prices*Some post-sec			-0.00383				0.000 n	
Housing prices*High school grad			-0.00353				-0.003	
Housing prices*English			-0.0174				-0.021	
Housing prices*French			-0.00202 n				-0.015	
Housing prices*Non-visible minority			-0.00683				-0.007	
Immigrant growth				2.244 n				4.180
Immigrant growth*University deg				-1.5733				0.557
Immigrant growth*Some post-sec				-0.850				-0.1718 n
Immigrant growth*High school grad				-0.517				-0.3891 n
Immigrant growth*English				-3.517				-3.2072
Immigrant growth*French				0.433 n				-3.035
Immigrant growth*Non-visible min				-0.016 n				-2.5842
Pseudo R squared	3.1%	3.3%	3.3%	3.3%	21.1%	21.1%	21.1%	21.1%
Increase in Chi-squared		1,204	1,433	1,050		588	144	454

Note: n- not significant at p = .05

Source: Pooled data from 1981, 1986, 1991, 1996, and 2001 census 20% micro data files.

Appendix 3. Logistic regressions showing the association of migration status with individual socio-demographic characteristics and city-level factors, the Canadian-born population age 25 to 64, Vancouver

	Out-migration				In-migration			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Intercept	-3.968	-4.129	1.110 n	-3.398	-6.850	-6.601	-9.174	-7.465
Male	0.015 n	0.015 n	0.015 n	0.015 n	0.029	0.030	0.029	0.029
University degree	0.527	0.377	1.427	0.849	0.772	0.875	0.877	0.685
Some post-secondary	0.164	0.074	0.387	0.318	0.623	0.660	0.767	0.619
High school graduation	-0.191	-0.218	-0.433 n	-0.160	0.203	0.162	1.079	0.345
English	0.559	0.978	-5.588	-0.394 n	0.627	0.387	1.658 n	0.962
French	2.388	3.015	-4.229	1.591	-2.722	-3.167	-0.056 n	-2.103
2+ adults, no kids	-0.239	-0.240	-0.240	-0.241	0.583	0.582	0.580	0.579
Unattached individual	-0.077	-0.079	-0.078	-0.079	1.370	1.370	1.367	1.366
One adult with kids	0.211	0.209	0.210	0.209	0.590	0.590	0.588	0.587
Age 25-34	0.291	0.291	0.290	0.289	1.406	1.406	1.399	1.402
Age 35-44	0.208	0.207	0.206	0.203	0.942	0.940	0.933	0.934
Age 45-54	-0.185	-0.185	-0.185	-0.186	0.401	0.400	0.400	0.399
Non-visible minority	1.047	0.889	1.446	1.105	-0.359	-0.383	-0.549 n	-0.287
Ninety	-0.290	-0.186 n	0.431 n	0.042 n	-0.133 n	-0.243 n	-0.494	-0.454
Ninety*University degree	-0.315	-0.222	-0.161	-0.066 n	0.305	0.245	0.345	0.270
Ninety*Some post-secondary	-0.146	-0.087	-0.099	-0.009 n	-0.042	-0.064	0.001 n	-0.026 n
Ninety*High school graduation	-0.104	-0.082	-0.137	-0.051 n	-0.111	-0.088	0.051 n	0.001 n
Ninety*English	0.125 n	-0.119 n	-0.770	-0.480	-0.119 n	0.000 n	0.041 n	0.047 n
Ninety*French	0.170 n	-0.195 n	-0.793	-0.330 n	0.373	0.615	0.802	0.732
Ninety*Non-visible minority	0.394	0.471	0.448	0.412	-0.124	-0.122	-0.187	-0.129 n
Restructuring		1.520 n				-3.688		
Restructuring*University degree		1.608				-1.2133		
Restructuring*Some post-second		0.907				-0.410 n		
Restructuring*High school grad		0.193 n				0.508 n		
Restructuring*English		-4.563				3.356		
Restructuring*French		-6.740				5.616		
Restructuring*Non-visible minority		2.056				0.510 n		
Housing prices			-0.062				0.028	
Housing prices*University degree			-0.011				-0.001 n	
Housing prices*Some post-sec			-0.003 n				-0.002 n	
Housing prices*High school grad			0.003 n				-0.011	
Housing prices*English			0.075				-0.013 n	
Housing prices*French			0.081				-0.032	
Housing prices*Non-visible minority			-0.005 n				0.002 n	
Immigrant growth				-2.609				2.609
Immigrant growth*University deg				-1.534				0.355 n
Immigrant growth*Some post-sec				-0.766				-0.015 n
Immigrant growth*High school grad				-0.211 n				-0.681
Immigrant growth*English				4.414				-1.364 n
Immigrant growth*French				3.701				-2.674
Immigrant growth*Non-visible min				-0.231 n				-0.229 n
Pseudo R squared	2.4%	2.4%	2.4%	2.4%	10.6%	10.6%	10.6%	10.6%
Increase in Chi-squared		52	82	232		54	340	295

Note: n- not significant at $p = .05$

Source: Pooled data from 1981, 1986, 1991, 1996, and 2001 census 20% micro data files

Appendix 4. Logistic regressions showing the association of migration status with individual socio-demographic characteristics and city-level factors, long-term immigrants age 25 to 64, Toronto

	Out-migration				In-migration			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Intercept	-4.818	-4.541	-4.256	-4.722	-4.727	-5.262	-5.146	-4.833
1991-95 cohort	-0.058 n	-0.006 n	-0.050 n	-0.140	0.107	0.029 n	0.170	0.179
1986-90 cohort	-0.073 n	-0.073 n	-0.071 n	-0.162	-0.058 n	-0.072 n	0.001 n	0.005 n
1981-85 cohort	0.067	0.074	0.088	-0.036 n	-0.089	-0.113	-0.053 n	-0.025 n
1976-80 cohort	-0.144	-0.144	-0.140	-0.202	-0.100	-0.107	-0.056	-0.055
1971-75 cohort	-0.048	-0.054	-0.059	-0.085	-0.139	-0.134	-0.099	-0.104
Years since immigration	-0.007	-0.006	-0.007	-0.010	-0.024	-0.025	-0.022	-0.022
Years since imm squared	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000
Male	0.047	0.046	0.047	0.048	0.008 n	0.007 n	0.006 n	0.007 n
University degree	0.769	1.437	1.234	1.104	0.907	0.766	0.795	0.667
Some post-secondary	0.567	0.684	0.539	0.534	0.439	0.493	0.480	0.376
High school graduation	0.305	0.319	0.280	0.312	0.295	0.232 n	0.380	0.267
English	0.781	0.513	0.359	0.475	0.175	0.532	0.560	0.433
French	1.370	0.343 n	0.266 n	0.631	-1.752	-0.962	-1.012	-1.242
2+ adults, no kids	0.062	0.059	0.059	0.055	0.265	0.267	0.273	0.272
Unattached individual	0.367	0.365	0.366	0.364	0.742	0.745	0.750	0.749
One adult with kids	0.054 n	0.053 n	0.054 n	0.053 n	0.213	0.214	0.216	0.217
Age 25-34	0.693	0.696	0.697	0.700	1.159	1.155	1.151	1.155
Age 35-44	0.304	0.304	0.303	0.305	0.685	0.685	0.685	0.685
Age 45-54	-0.201	-0.200	-0.200	-0.204	0.202	0.202	0.205	0.206
Non-visible minority	0.547	0.097 n	0.072 n	0.236	-0.516	0.082 n	-0.035 n	-0.108
Ninety	0.023 n	-0.209	0.237	0.075 n	-0.390	0.061 n	-0.545	-0.425
Ninety*University degree	-0.224	-0.785	-0.025 n	-0.064 n	-0.001 n	0.115 n	-0.073 n	-0.136
Ninety*Some post-secondary	-0.146	-0.246	-0.147	-0.135	-0.131	-0.177	-0.129	-0.185
Ninety*High school graduation	-0.114	-0.127 n	-0.105	-0.072 n	-0.106	-0.055 n	-0.090 n	-0.150
Ninety*English	-0.203	0.022 n	-0.388	-0.324	0.035 n	-0.260	0.191	0.144
Ninety*French	0.042 n	0.881	-0.452	-0.295 n	-0.035 n	-0.684	0.298	0.179 n
Ninety*Non-visible minority	0.078	0.458	-0.101	-0.076	0.028 n	-0.481	0.243	0.233
Restructuring		-1.983				3.898		
Restructuring*University degree		-5.145				1.131 n		
Restructuring*Some post-second		-0.945 n				-0.386 n		
Restructuring*High school grad		-0.195 n				0.521 n		
Restructuring*English		2.046				-2.702		
Restructuring*French		7.993				-6.059		
Restructuring*Non-visible minority		3.385				-4.534		
Housing prices			-0.008				0.005	
Housing prices*University degree			-0.007				0.002	
Housing prices*Some post-sec			0.000 n				0.000 n	
Housing prices*High school grad			0.000 n				-0.001 n	
Housing prices*English			0.006				-0.005	
Housing prices*French			0.016				-0.011	
Housing prices*Non-visible min			0.007				-0.007	
Immigrant growth				-0.3917 n				0.399 n
Immigrant growth*University deg				-1.664				1.275
Immigrant growth*Some post-sec				0.092 n				0.387 n
Immigrant growth*High school grad				-0.156 n				0.239 n
Immigrant growth*English				1.453				-1.262
Immigrant growth*French				3.691				-2.527
Immigrant growth*Non-visible min				1.532				-2.072
Pseudo R squared	4.9%	5.0%	5.0%	5.1%	7.5%	7.5%	7.6%	7.6%
Increase in Chi-squared		159	276	454		167	330	338

Note: n- not significant at p = 05

Source: Pooled data from 1981, 1986, 1991, 1996, and 2001 census 20% micro data files

Appendix 5. Logistic regressions showing the association of migration status with individual socio-demographic characteristics and city-level factors, long-term immigrants age 25 to 64, Montreal

	Out-migration				In-migration			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Intercept	-4.348	-3.364	-3.416	-4.291	-6.902	-8.185	-7.265	-6.567
1991-95 cohort	0.083 n	0.301	0.744	0.151	0.106 n	-0.025 n	0.179 n	0.149 n
1986-90 cohort	-0.022 n	0.106 n	0.565	0.071 n	0.145 n	0.080 n	0.210	0.231
1981-85 cohort	-0.302	-0.232	0.260	-0.198	0.042 n	0.022 n	0.096 n	0.151
1976-80 cohort	-0.317	-0.186	0.103	-0.260	0.165	0.090 n	0.206	0.221
1971-75 cohort	-0.043 n	0.001 n	0.177	-0.005 n	-0.049 n	-0.072 n	-0.025 n	-0.015 n
Years since immigration	-0.030	-0.026	-0.012	-0.027	-0.012	-0.014	-0.010	-0.010
Years since imm squared	0.001	0.001	0.001	0.001	0.000 n	0.000 n	0.000 n	0.000 n
Male	0.006 n	0.005 n	0.001 n	0.005 n	0.167	0.168	0.165	0.168
University degree	1.032	0.420	0.687	1.046	0.977	1.774	1.503	0.803
Some post-secondary	0.776	0.583	0.743	0.900	0.422	0.923	0.664	0.300
High school graduation	0.320	0.061 n	0.419	0.539	0.358	0.580	0.804	0.496
English	1.189	1.099	1.230	1.317	-0.611	0.469	-0.266	-0.839
French	-0.179	-0.459	-1.012	-0.848	2.750	3.123	2.928	2.798
2+ adults, no kids	0.070	0.076	0.096	0.076	0.199	0.194	0.199	0.204
Unattached individual	0.346	0.348	0.359	0.350	0.898	0.896	0.897	0.902
One adult with kids	-0.003 n	-0.001 n	0.001 n	-0.002 n	0.636	0.631	0.634	0.637
Age 25-34	0.661	0.645	0.629	0.660	1.248	1.257	1.246	1.240
Age 35-44	0.344	0.342	0.345	0.347	0.852	0.856	0.854	0.848
Age 45-54	-0.020 n	-0.027 n	-0.020 n	-0.018 n	0.343	0.350	0.349	0.343
Non-visible minority	0.133	0.431	0.542	0.533	-0.229	-0.665	-0.300	0.032 n
Ninety	0.153	-0.736	0.488	0.143	-0.372	0.731	-0.607	-0.311
Ninety*University degree	-0.022 n	0.491	-0.346	-0.039 n	-0.278	-0.949	0.010 n	-0.343
Ninety*Some post-secondary	-0.185	-0.020 n	-0.273	-0.168	-0.262	-0.686	-0.127 n	-0.313
Ninety*High school graduation	-0.128 n	0.091 n	-0.143 n	-0.092 n	-0.277	-0.469	-0.034 n	-0.276
Ninety*English	-0.373	-0.294	-0.292	-0.330	-0.047 n	-0.946	0.144 n	-0.098 n
Ninety*French	-0.035 n	0.198 n	-0.586	-0.191	0.321	0.015 n	0.418	0.332
Ninety*Non-visible minority	-0.310	-0.550	0.158	-0.183	0.000 n	0.361	-0.029 n	0.085 n
Restructuring		-9.748				12.005		
Restructuring*University degree		6.203				-7.441		
Restructuring*Some post-second		1.944 n				-4.608		
Restructuring*High school grad		2.651 n				-1.980 n		
Restructuring*English		0.909 n				-10.289		
Restructuring*French		2.877 n				-3.676		
Restructuring*Non-visible minority		-3.177				4.214		
Housing prices			-0.015				0.006	
Housing prices*University degree			0.006				-0.008	
Housing prices*Some post-sec			0.001 n				-0.004 n	
Housing prices*High school grad			-0.001 n				-0.007	
Housing prices*English			-0.001 n				-0.005	
Housing prices*French			0.014				-0.003 n	
Housing prices*Non-visible minority			-0.008				0.001 n	
Immigrant growth				-0.316 n				-1.663
Immigrant growth*University deg				-0.025 n				0.897 n
Immigrant growth*Some post-sec				-0.568 n				0.643 n
Immigrant growth*High school grad				-1.000 n				-0.562 n
Immigrant growth*English				-0.634 n				1.092 n
Immigrant growth*French				3.194				-0.241 n
Immigrant growth*Non-visible min				-2.003				-1.293
Pseudo R squared	9.7%	9.9%	10.4%	9.8%	14.9%	15.0%	14.9%	14.9%
Increase in Chi-squared		360	893	195		155	28	54

Note: n- not significant at p = 05

Source: Pooled data from 1981, 1986, 1991, 1996, and 2001 census 20% micro data files.

Appendix 6. Logistic regressions showing the association of migration status with individual socio-demographic characteristics and city-level factors, long-term immigrants age 25 to 64, Vancouver

	Out-migration				In-migration			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Intercept	-4.226	-4.477	-1.289	-3.881	-6.001	-5.467	-9.486	-6.895
1991-95 cohort	0.147	0.178	-0.011 n	0.091 n	-0.686	-0.747	-0.395	-0.486
1986-90 cohort	-0.119 n	-0.049 n	-0.142	-0.118 n	-0.204	-0.339	-0.143	-0.230
1981-85 cohort	-0.111	-0.019 n	-0.108	-0.097 n	-0.155	-0.315	-0.143	-0.243
1976-80 cohort	-0.107	-0.057 n	-0.115	-0.111	-0.047 n	-0.136	-0.028 n	-0.059 n
1971-75 cohort	-0.089	-0.071	-0.104	-0.094	-0.039 n	-0.071	-0.009 n	-0.037 n
Years since immigration	-0.010	-0.008	-0.012	-0.011	-0.028	-0.031	-0.025	-0.027
Years since imm squared	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Male	0.053	0.052	0.053	0.053	0.038	0.036	0.037	0.037
University degree	0.493	0.459	0.666 n	0.647	0.766	0.585	1.811	0.937
Some post-secondary	0.184	0.147	-0.139 n	0.212	0.644	0.554	1.122	0.712
High school graduation	-0.029 n	0.000 n	0.196 n	0.005 n	0.338	0.217	0.914 n	0.411
English	0.450	0.487	-0.924	0.228	0.236	-0.002 n	1.465	0.561
French	1.195	1.074	3.165 n	1.413	-1.801	-2.560	1.912 n	-0.910
2+ adults, no kids	0.044	0.047	0.044	0.042 n	0.211	0.205	0.206	0.205
Unattached individual	0.307	0.309	0.307	0.305	0.915	0.912	0.912	0.911
One adult with kids	0.286	0.287	0.287	0.286	0.458	0.453	0.452	0.451
Age 25-34	0.975	0.971	0.971	0.974	0.865	0.870	0.867	0.866
Age 35-44	0.385	0.384	0.383	0.385	0.588	0.591	0.588	0.589
Age 45-54	-0.094	-0.094	-0.097	-0.097	0.165	0.166	0.165	0.163
Non-visible minority	0.676	0.882	-1.086	0.310	-0.127	-0.300	0.436 n	0.121
Ninety	-0.217	-0.108 n	0.244	-0.004 n	0.497	0.231	-0.174	-0.153
Ninety*University degree	-0.299	-0.283	-0.272	-0.181	-0.178	-0.056 n	0.022 n	-0.027 n
Ninety*Some post-secondary	-0.159	-0.140	-0.210	-0.128 n	-0.363	-0.297	-0.264	-0.287
Ninety*High school graduation	-0.045 n	-0.065 n	-0.015 n	-0.012 n	-0.397	-0.310	-0.273	-0.302
Ninety*English	0.091	0.067 n	-0.123 n	-0.058 n	-0.272	-0.130	-0.037 n	-0.039 n
Ninety*French	-0.138 n	-0.068 n	0.177 n	0.050 n	0.126 n	0.599	0.760	0.755
Ninety*Non-visible minority	0.305	0.205	0.040 n	0.059 n	-0.236	-0.156	-0.144	-0.095 n
Restructuring		2.833				-6.126		
Restructuring*University degree		0.397 n				1.922		
Restructuring*Some post-second		0.424 n				0.897 n		
Restructuring*High school grad		-0.267 n				1.161 n		
Restructuring*English		-0.333 n				2.683		
Restructuring*French		1.180 n				8.018		
Restructuring*Non-visible minority		-2.502				2.313		
Housing prices			-0.036				0.043	
Housing prices*University			-0.002 n				-0.013	
Housing prices*Some post			0.004 n				-0.006 n	
Housing prices*High school			-0.003 n				-0.007 n	
Housing prices*English			0.017				-0.015	
Housing prices*French			-0.024 n				-0.046	
Housing prices*Non-visible			0.022				-0.007	
Immigrant growth				-1.593				4.165
Immigrant growth*University deg				-0.750 n				-0.829
Immigrant growth*Some post-sec				-0.156 n				-0.359 n
Immigrant growth*High school grad				-0.182 n				-0.425 n
Immigrant growth*English				1.054				-1.490
Immigrant growth*French				-1.131 n				-4.136
Immigrant growth*Non-visible min				1.709				-1.074
Pseudo R squared	5.8%	5.8%	5.9%	5.8%	4.7%	4.8%	4.8%	4.8%
Increase in Chi-squared		44	72	58		192	215	352

Note: n- not significant at p = .05

Source: Pooled data from 1981, 1986, 1991, 1996, and 2001 census 20% micro data files.

Appendix 7. Estimated average five-year out- and in-migration rates for the Canadian-born population aged 25 to 64, controlling for economic restructuring, housing price variation, and immigration growth, for Toronto, Montreal and Vancouver

	Estimated out-migration rate %						Estimated in-migration rate %					
	Controlling for economic restructuring		Controlling for housing price variation		Controlling for immigration growth		Controlling for economic restructuring		Controlling for housing price variation		Controlling for immigration growth	
	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001
Toronto												
Total	9.1	10.8	10.9	8.5	11.1	8.2	1.3	0.7	1.1	0.9	1.1	0.9
Education												
< High school	6.9	11.5	9.7	8.0	9.9	7.7	0.8	0.3	0.6	0.5	0.6	0.5
High school graduation	6.2	9.8	8.6	6.6	8.7	6.5	1.0	0.4	0.8	0.7	0.8	0.7
Some post-secondary	9.7	11.6	11.8	8.9	12.0	8.7	1.2	0.5	1.0	0.8	1.0	0.8
University degree	12.5	9.2	12.1	9.5	12.4	9.1	3.1	2.2	3.0	2.4	3.0	2.4
Home Language												
Non English/French	1.3	4.7	2.5	3.2	2.5	3.1	1.0	1.0	1.5	0.3	1.4	0.4
English	9.1	10.7	10.8	8.4	11.0	8.2	1.8	1.0	1.5	1.3	1.5	1.3
French	31.7	41.5	41.4	29.1	41.1	29.0	0.3	0.0	0.2	0.1	0.2	0.1
Visible minority status												
Visible minority	5.3	3.1	5.3	2.9	5.4	2.8	1.1	3.5	2.3	2.0	2.2	2.3
Non-visible minority	9.3	11.2	11.2	8.8	11.4	8.5	1.3	0.6	1.1	0.9	1.1	0.9
Montreal												
Total	8.2	4.3	6.7	6.3	7.0	5.9	0.8	1.0	0.9	0.8	0.9	0.8
Education												
< High school	6.8	4.6	6.1	5.6	6.2	5.6	0.5	0.5	0.5	0.5	0.5	0.5
High school graduation	7.2	3.2	5.6	5.3	5.9	4.9	0.7	0.7	0.7	0.6	0.8	0.6
Some post-secondary	8.0	3.9	6.3	6.0	6.7	5.6	0.9	1.1	1.1	0.9	1.0	0.9
University degree	12.7	6.1	10.0	9.9	10.7	8.7	1.6	1.8	1.9	1.5	1.8	1.6
Home Language												
Non English/French	2.4	1.2	1.9	1.7	1.9	1.7	0.5	0.6	0.7	0.4	0.6	0.4
English	15.2	7.0	10.8	12.8	12.6	10.6	0.2	0.1	0.2	0.1	0.2	0.1
French	6.8	3.8	5.9	5.0	5.9	5.0	2.9	4.1	3.7	3.1	3.5	3.3
Visible minority status												
Visible minority	2.8	5.1	4.2	3.1	3.5	4.2	0.9	0.8	1.0	0.7	0.9	0.7
Non-visible minority	8.3	4.3	6.7	6.4	7.0	6.0	0.8	1.0	0.9	0.8	0.9	0.8
Vancouver												
Total	10.4	11.0	10.6	10.6	10.9	10.4	0.7	0.5	0.8	0.5	0.8	0.5
Education												
< High school	9.4	10.7	9.5	10.3	10.1	9.8	0.5	0.4	0.5	0.3	0.5	0.3
High school graduation	7.6	8.3	7.9	7.9	8.1	7.7	0.5	0.4	0.6	0.4	0.6	0.4
Some post-secondary	10.5	11.1	10.8	10.7	11.0	10.6	0.8	0.5	0.9	0.5	0.9	0.5
University degree	14.3	13.3	14.2	13.3	14.4	13.1	1.1	1.0	1.2	0.9	1.2	0.9
Home Language												
Non English/French	7.3	8.8	6.5	9.5	7.1	8.9	0.5	0.3	0.6	0.2	0.6	0.2
English	10.3	10.8	10.5	10.5	10.8	10.2	1.0	0.7	1.1	0.6	1.1	0.7
French	43.7	43.0	43.5	42.9	42.1	44.3	0.1	0.1	0.1	0.1	0.1	0.1
Visible minority status												
Visible minority	4.1	2.4	4.2	2.3	4.3	2.3	1.3	1.2	1.4	1.2	1.4	1.2
Non-visible minority	10.8	11.5	11.0	11.2	11.3	10.9	0.7	0.5	0.8	0.4	0.7	0.5

Source: Estimated from regression models in Appendix 1 to 3.

Appendix 8. Estimated average five-year out- and in-migration rates for long-term immigrants aged 25 to 64, controlling for economic restructuring, housing price variation, and immigration growth, for Toronto, Montreal and Vancouver

	Estimated out-migration rate %						Estimated in-migration rate %					
	Controlling for economic restructuring		Controlling for housing price variation		Controlling for immigration growth		Controlling for economic restructuring		Controlling for housing price variation		Controlling for immigration growth	
	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001	1976-1991	1991-2001
Toronto												
Total	4.0	3.6	4.2	3.4	4.4	3.1	2.2	1.4	2.2	1.6	2.1	1.6
Education												
< High school	2.1	3.1	2.7	2.5	2.8	2.4	1.5	1.0	1.4	1.1	1.4	1.2
High school graduation	3.0	3.6	3.7	2.9	3.7	2.8	1.8	1.3	1.8	1.3	1.8	1.3
Some post-secondary	4.6	4.2	5.0	3.7	5.2	3.4	2.2	1.3	2.1	1.4	2.1	1.5
University degree	7.1	3.4	5.9	4.9	6.2	4.3	3.7	2.8	3.8	2.7	3.8	2.8
Home Language												
Non English/French	2.3	2.5	2.3	2.5	2.4	2.3	2.0	1.5	2.2	1.3	2.1	1.4
English	5.0	4.3	5.3	3.9	5.5	3.6	2.5	1.6	2.4	1.8	2.4	1.9
French	7.0	12.8	11.6	7.9	11.6	7.9	0.1	0.0	0.0	0.0	0.0	0.0
Visible minority status												
Visible minority	2.7	2.1	2.5	2.3	2.6	2.1	2.9	2.5	3.4	2.0	3.3	2.1
Non-visible minority	4.9	4.7	5.4	4.1	5.6	3.8	1.9	1.0	1.7	1.4	1.7	1.4
Montreal												
Total	7.1	2.1	4.8	5.6	5.3	4.4	0.3	0.4	0.4	0.3	0.4	0.3
Education												
< High school	4.2	1.3	2.9	3.5	3.0	2.9	0.2	0.3	0.3	0.2	0.3	0.2
High school graduation	5.0	1.3	3.2	4.3	3.6	3.2	0.2	0.4	0.4	0.2	0.4	0.2
Some post-secondary	8.7	1.6	5.3	6.5	6.3	4.8	0.3	0.3	0.4	0.2	0.4	0.2
University degree	10.6	5.0	8.1	8.8	8.8	7.3	0.7	0.5	0.7	0.5	0.8	0.4
Home Language												
Non English/French	4.7	1.6	3.2	4.1	3.4	3.3	0.3	0.5	0.5	0.3	0.5	0.3
English	13.9	3.3	8.6	10.7	10.5	7.9	0.2	0.1	0.2	0.2	0.2	0.1
French	2.7	1.4	2.7	1.9	2.2	2.0	5.4	8.5	7.4	6.2	7.0	6.6
Visible minority status												
Visible minority	6.1	2.8	4.7	5.3	4.7	4.6	0.4	0.4	0.5	0.3	0.5	0.3
Non-visible minority	7.6	1.8	4.8	5.8	5.6	4.3	0.3	0.4	0.4	0.3	0.4	0.3
Vancouver												
Total	5.3	5.4	5.0	5.5	5.3	5.2	0.8	0.7	1.0	0.6	0.9	0.6
Education												
< High school	4.5	5.2	4.1	5.4	4.5	5.0	0.5	0.6	0.6	0.5	0.6	0.5
High school graduation	4.3	4.9	3.7	5.2	4.2	4.7	0.7	0.5	0.8	0.5	0.8	0.4
Some post-secondary	5.2	5.2	5.0	5.2	5.3	5.0	1.0	0.7	1.1	0.6	1.1	0.6
University degree	7.4	6.2	7.0	6.3	7.3	6.1	1.2	1.1	1.3	1.0	1.3	0.9
Home Language												
Non English/French	4.0	4.2	3.5	4.5	3.9	4.2	0.8	0.7	1.0	0.6	0.9	0.6
English	6.0	6.0	5.8	6.0	6.1	5.7	0.9	0.8	1.0	0.7	1.0	0.7
French	12.9	11.0	10.7	13.1	12.1	11.7	0.0	0.0	0.0	0.0	0.0	0.0
Visible minority status												
Visible minority	3.3	3.0	2.7	3.3	3.1	3.1	1.0	0.9	1.1	0.8	1.1	0.7
Non-visible minority	7.2	7.5	7.0	7.5	7.5	7.1	0.8	0.6	0.9	0.6	0.9	0.6

Source: Estimated from regression models in Appendix 4 to 6.

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